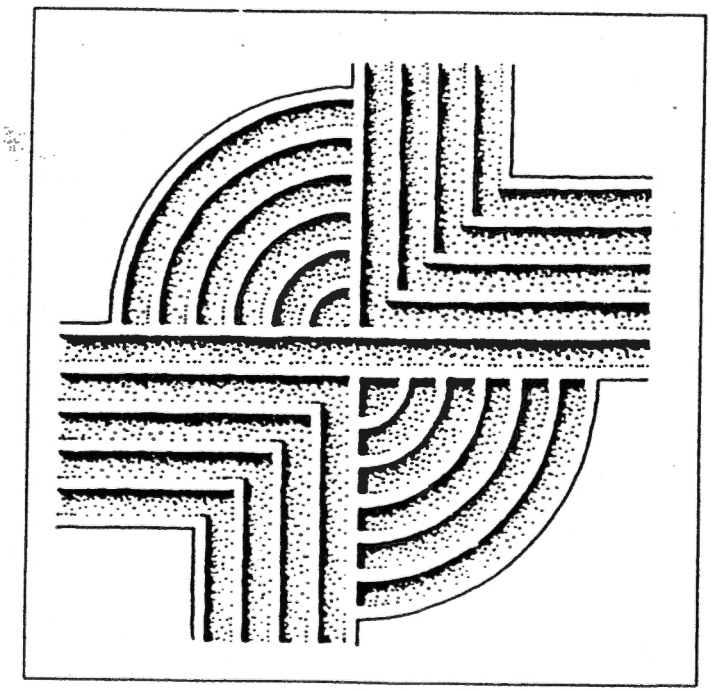
ARCHAEOLOGICAL SURVEY OF THE MCQUEEN TAP 115 kV TAP, BERKELEY AND DORCHESTER COUNTIES, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 344

ARCHAEOLOGICAL SURVEY OF THE MCQUEEN 115kv TAP, BERKELEY AND DORCHESTER COUNTIES, SOUTH CAROLINA

Prepared By:
Michael Trinkley, Ph.D.

Prepared For:
Mr. Ken Smoak
Sabine & Waters
P.O. Box 1072
Summerville, S.C. 29484

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Chicora Foundation, Inc.
PO Box 8664
Columbia, SC 29202-8664
803/787-6910
Email:chicora@bellsouth.net
www.chicora.org

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ABSTRACT

This study reports on an intensive archaeological survey of the proposed McQueen 115kV tap transmission line in Berkeley and Dorchester counties, South Carolina. The project will run from the existing Carnes Crossroads-Arco 115kV transmission line southward in Berkeley County, crossing I-26 and then tending slightly southwestward crossing Red Bay Road and then joining with and paralleling SR-22 until it extends off to the southeast and south, crossing into Dorchester County. At the county line the transmission line turns to the southwest again and continues until in joins with the new McQueen substation (which is not included in this survey). The proposed corridor is 3.2 miles in length and is 70 feet in width throughout.

The work, conducted through the firm of Sabine and Waters for Santee Cooper, is intended to assist this agency comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800. The project was specifically limited to an archaeological survey and no architectural evaluations were conducted.

The proposed project will result in the clearing of the proposed corridor and erection of poles generally 70 to 80 feet in height. This work may damage or destroy archaeological sites in the corridor. It is also possible that the work may be considered visually intrusive, affecting above-ground historic resources. Other affects, temporary in nature, may include construction traffic on local roads, and increased dust and noise levels.

Historically the survey area was considered to be low and inhospitable. An examination of secondary historic accounts failed to identify any historic sites in the project area. It was not possible to conduct background on archaeological sites in the area since the SC Institute of Anthropology and Archaeology was closed for Christmas break and will not reopen until January 2002. Both Berkeley and Dorchester have had comprehensive architectural assessments and background research at the SC Department of Archives and History revealed nine previously identified sites in a 1-mile area of potential effects (APE). All of these sites, however, have been previously determined not eligible for inclusion on the National Register.

The archaeological survey consisted of shovel testing at 100 foot intervals along a single transects laid out along the centerline of the transmission corridor. The shovel tests revealed that much of the soil in the area is low and poorly drained. Many areas exhibited water within the upper 2-feet of the their profiles and many of the A horizon soils were black to dark gray loam over yellowish-brown to gray subsoils. Several cultivated fields were present, although much of the area was densely wooded. At the time of the survey the centerline had been cut much earlier in the year and in places had been overgrown. In retrospect, it is likely that survey using transects and shovel tests at 200 foot intervals would have been appropriate for the study area, given its low, poorly drained setting.

No archaeological sites were identified during this investigation and no additional management activities are recommended. It is possible that archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is

discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

The investigation of the proposed 3.2 mile long McQueen 115kV tap transmission line corridor was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Ken Smoak of Sabine & Waters. The transmission corridor is situated in southern Berkeley County and crosses over into northeastern Dorchester County, about 7 miles northwest of Summerville and 20 miles northwest of Charleston (Figure 1). Adjacent to the I-26 corridor and in relatively close proximity to both Summerville and Charleston, this area of Berkeley and Dorchester counties has seen exceptional growth and development over the past 20 years, with what was originally almost entirely wooded tracts being transformed into a series of housing developments.

This work was conducted to assist Santee Cooper, through Sabine & Waters, comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800. The investigations consist of an intensive archaeological survey. No examination of architectural sites, beyond the routine background investigation, was conducted as part of this study.

The corridor is 70-feet in width and, at the time of the survey was cut, although overgrown in some areas. The project begins at the existing Carnes Crossroads-Arco 115kV transmission line, about 4,800 feet west of its crossing of SR16. It runs roughly southwest for about 3300 feet, crossing I-26, and turning more sharply to the southwest and then west, for an additional 1,800 feet. It crosses Dawson Branch in this area. At this point it turns again to the southwest for about 800 feet, then to the eat for about 300 feet. It then runs approximately south for 900 feet. At this point it intersects with SR46 and parallels the south side of this road for 2,200 feet. At the intersection of SR46 with another road, the corridor turns to the south, crossing Kelly Branch and running along the edge of several fields for 2,700 feet. It then turns to the southwest and continues for about 4,700 feet, terminating at the new McQueen substation, which was not part of this survey (Figure 2).

Chicora was requested to submit a budgetary proposal for an intensive survey by Mr. Ken Smoak of Sabine & Waters on December 11, 2001 and a notice to proceed with the work was received on December 17. The archaeological investigation was conducted by Dr. Michael Trinkley. The field crew consisted of Mr. Tom Covington and Ms. Nicole Southerland. The field investigations were conducted on December 19 and 20 and required a total of 16 person hours.

An effort was made to consult the statewide archaeological site files held by the South Carolina Institute of Archaeology and Anthropology on December 17. At that time we were informed that the office was closed to all researchers until early January. Not being allowed access, we had no choice but to continue with the project without the benefit of this information.

It was possible to access the South Carolina Department of Archives and History GIS database, although the archaeological layer on this system has been removed some time ago. Nevertheless, it was possible to determine that there are no National Register of Historic Places buildings, districts, structures, sites, or objects on or within a mile of the project area. Both Dorchester and Berkeley counties have received comprehensive architectural surveys and nine sites were identified within a mile of the proposed undertaking. Those in Berkeley County include 496-0004 and 496-0005. Those

Figure 1. Location of the project in Berkeley and Dorchester Counties (basemap is USGS South Carolina 1:500,000).

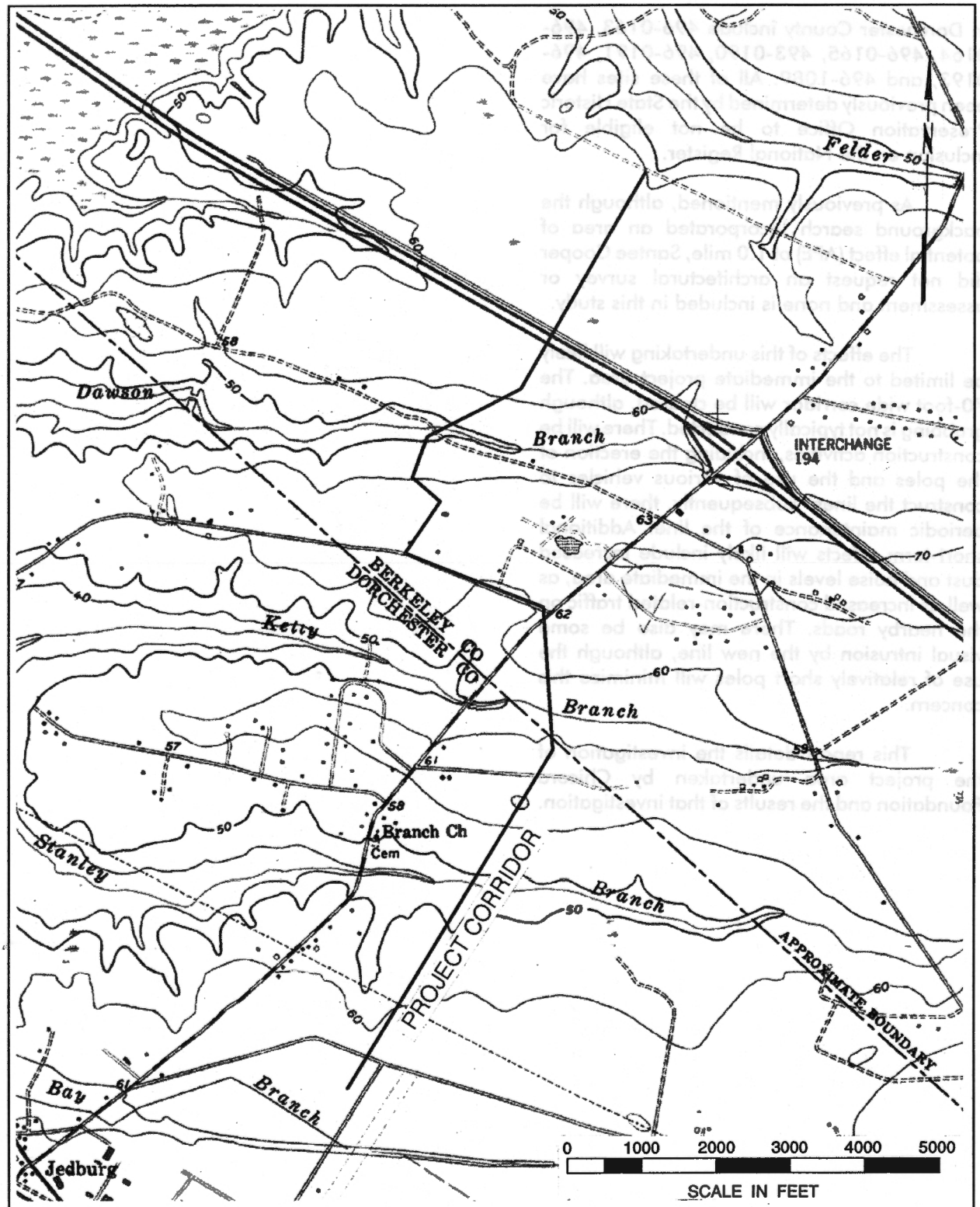


Figure 2. Survey corridor (basemap is USGS Summerville 1:24,000).

in Dorchester County include 496-0163, 496-0164, 496-0165, 493-0190, 496-0191, 496-0193, and 496-1089. All of these sites have been previously determined by the State Historic Preservation Office to be not eligible for inclusion on the National Register.

As previously mentioned, although the background search incorporated an area of potential effect (APE) of 1.0 mile, Santee Cooper did not request an architectural survey or assessment and none is included in this study.

The effects of this undertaking will likely be limited to the immediate project area. The 70-foot wide corridor will be cleared, although grubbing is not typically conducted. There will be construction activities, including the erection of the poles and the use of various vehicles to construct the lines. Subsequently, there will be periodic maintenance of the line. Additional short-term affects will likely include increased dust and noise levels in the immediate area, as well as increased construction-related traffic on the nearby roads. There may also be some visual intrusion by the new line, although the use of relatively short poles will minimize this concern.

This report details the investigation of the project area undertaken by Chicora Foundation and the results of that investigation.

ENVIRONMENTAL BACKGROUND

Physiographic Region

Berkeley and Dorchester Counties are situated in the lower Atlantic Coastal Plain of South Carolina. Containing about 1,660 square miles combined, these two counties are bordered to the north by Clarendon, Williamsburg, and Georgetown counties, the division being the Santee River. Both are bordered to the east by Charleston County. To the south of Dorchester are Charleston and Colleton counties, while to the west is Orangeburg County. Within this block, the project area is situated just west of the center, in the vicinity of the small community of Jedburg.

The topography of the area is characterized by subtle undulation characteristic of beach ridge plains. The elevations range from about 3-4 to approximately 105 feet above mean sea level (AMSL). In the vicinity of the transmission line the elevations range from about 50 to 60 feet AMSL. The topography is generally level with slopes rarely greater than about 2% — generally in the areas overlooking drainages such as Dawson, Kelly, or Stanley branches.

The area is drained by three significant river systems: the Santee, Wando, and Cooper rivers. The Santee has a large freshwater discharge and forms the northern boundary with neighboring Georgetown County. The Wando is a coastal river, being dominated by tidal action. The Cooper River, which flows through the center of the County, was also originally a tidal river, but it has been modified by a large volume of fresh water diverted from the Santee through Lakes Marion and Moultrie. In addition, there are a number of broad, low-gradient interior drainages that are present either as extensions of tidal streams or flooded bays and swales. In particular, these include Dawson, Kelly, and Stanley branches, all of which flow westward, draining into Cypress Swamp, west of the project area. To the south of the project is Green Bay Swamp and Platt Branch, which also drain into Cypress Swamp. To the south this becomes Great Cypress Swamp and it empties into the Ashley River.

As previously mentioned, Berkeley and Dorchester counties are made up of one broad physiographic area, often called the lower Atlantic Coastal Plain or the Atlantic Coast Flatwoods. The surface soils are almost entirely sedimentary and were transported into the area from elsewhere. The geology is characteristic of the region; the formations covering the surface date from the Pleistocene and include sands, clays, gravels, and phosphates.

Geology and Soils

In general the soils in this portion of Berkeley are part of the Goldsboro-Lynchburg-Rains Association and represent moderately either well drained soils that have a sand surface layer and loamy subsoil or soils which are somewhat poorly to poorly drained that are loamy throughout. In contrast, across the border into Dorchester County, the soils are classified as belonging to the Jedburg-Daleville-Izagora Association. In spite of the different name, these soils are also moderately well drained to poorly drained which a loamy surface layer and thick, loamy subsoil. Both associations are found in nearly level to gently sloping areas on upland terraces or small ridges.

There are 10 primary soils found along the transmission line corridor — four soil series in Dorchester County and six in Berkeley County. Those in Dorchester include the Daleville silt loams, Grifton fine sandy loams, Izagora silt loams, and Jedburg loams (Eppinette 1990).

Formed in loamy marine sediments, the typical Daleville soils exhibit an Ap horizon about

0.7 foot in depth of very dark grayish brown (10YR3/2) silt loam over an E horizon of light gray (10YR7/1) silt loam to depths of about 1.3 feet. These soils are found in depressions and drainageways on upland terraces and may have season high water tables of 0.5 to 1.5 feet below grade.

The Grifton soils are also formed in marine sediments, but are found on floodplains and along small drainages. They are frequently flooded and may have a seasonal high water table within a foot of the surface. The A horizon, usually about 0.5 foot in depth, is a grayish brown (10YR4/2) sandy loam overlying an E horizon of light gray (10YR7/2) fine sandy loam to about 0.8 foot. Below this is a gray (10YR5/1) sandy clay.

The Izagora Series soils are found on gently sloping upland stream terraces and low ridges. As a result, they are better drained and seasonal high water is typically not closer than 1.5 to 2.5 feet of the surface. These soils may have an Ap horizon of dark grayish brown (10YR4/2) silt loam to a depth of about 0.5 foot. A Bt1 horizon of yellowish brown (10YR5/6) silt loam may be found below this to a depth of 1.1 feet.

The Jedburg soils are found on broad upland terraces, but may still exhibit a high water table within 0.5 foot of the surface. The typical profile consists of an A horizon of very dark gray (10YR3/2) loam about 0.4 foot in depth overlying an A2 horizon of dark grayish brown (10YR4/2) loam to about 0.7 foot. Below this, to a depth of about 1.4 feet, is a BE horizon of light yellowish brown (10YR6/4) loam.

The Berkeley County soils on the transmission line corridor include Duplin fine sandy loams, Goldsboro loamy sands, Lenoir fine sandy loams, Megett loams, Norfolk loamy sands, and Wahee loams (Long 1980).

The Duplin soils are formed in clayey Coastal Plain sediments and are found on nearly level to gently sloping areas that are moderately well drained. In fact, the seasonal high water table is rarely above about 2.0 feet below grade. These soils have an Ap horizon of grayish brown (10YR5/2) fine sandy loam to a depth of about 0.5 foot. Below, to about 1.4 feet, is a B21t horizon of yellowish brown (10YR5/6) clay loam.

The Goldsboro soils are nearly level and moderately well drained. They, too, have seasonal high water tables which are deep, rarely above 2.5 feet below the surface. The A horizon, about 0.6 foot in depth, is a very dark grayish brown (10YR3/2) loamy sand. It overlies an A2 horizon of light yellowish brown (2.5Y6/4) to a depth of about 1.3 feet. Below this is a B21t horizon of yellowish brown (10YR5/6) sandy clay to nearly 2 feet.

The Lenoir soils are deep, but generally poorly drained. They may have a seasonal high water table within a foot of the surface. The A horizon grades from a black (10YR2/1) to a dark gray (10YR4/1) sand loam encompassing the upper 0.6 foot of soil. Below is a B1 horizon of light yellowish brown (2.5Y6/4) very fine sandy loam to a depth of 1.3 feet.

The Megett soils are also nearly level and poorly drained. They exhibit a seasonal high water from a foot below the surface to the surface. The A horizon again grades from a very dark gray (10YR3/1) into a dark gray (10YR4/1) loam over about 0.6 foot. Below is a B21g horizon of dark gray (10YR4/1) clay loam.

The Norfork soils are nearly level to gently sloping, deep, and well drained. On these soils the seasonal high water table is almost always 6 feet or more below the surface. The Ap horizon, about 0.5 foot in depth, is a dark grayish brown (10YR4/2) loamy sand. The underlying B1 horizon is a dark yellow brown (10YR4/4) about 0.2 foot in depth. Below this is a B21t horizon of strong brown (7.5YR5/6) sandy clay loam.

The last major soil series, the Wahee, is somewhat poorly drained, with a seasonal high water table within 0.5 foot of the surface. The A horizon grades from a very dark gray (10YR3/1) into a dark gray (10YR4/1) loam over about 0.4 foot. Below is a light yellowish brown (10YR6/4)

silty clay loam to a depth of 0.8 foot. Below this is a B22t horizon of grayish brown (10YR5/2) silty clay loam.

Climate

Berkeley and Dorchester counties have a subtropical climate, characterized by warm summers, mild winters, and adequate precipitation fairly evenly spread throughout the year. Except in the summer, when maritime tropical air controls the climate of the area, the daily weather patterns are controlled by west to east moving pressure systems and associated fronts.

Yearly precipitation averages 47 inches, but ranges from 39 to 55 inches. The growing season, from April to September, receives an average of 31 inches or about 66% of the yearly total. The average length of the freeze-free growing season is approximately 260 days, although frosts can occur as early as October 26 and as late as April 15 (Long 1980:46).

Mills remarked in 1826 that Carolina was similar to European climates, lying at a similar latitude. He noted that:

> in comparing the climate of South Carolina, with similar climates in Europe, we find it lying under the same atmospheric influences with Aix, Rochelle, Montpelier, Lyons, Bordeaux, and other parts of France; with Milan, Turin, Padua, Mantua, and other parts of Italy (Mills 1972 [1826]:133).

The coastal region is a moderately high risk zone for tropical storms, with 169 hurricanes being documented from 1686 to 1972 (0.59 per year) (Mathews et al. 1980:56). One of the most devastating in the eighteenth century was the hurricane of September 15, 1752. One report listed 92 people drowned, although the death toll, especially among the African American slaves was likely much higher. The storm also had considerable long-term effects and Calhoun notes that:

> the destruction of trees was severe; one plantation owner's loss was assessed at $50,000 and many of those trees which survived were "heart-shaken," and unfit for use. Crops were even more damaged as the storm followed a severe drought. It was necessary to enact laws to regulate the exportation and sale of corn, "Peafe," and small rice, so that "the poor may be able to purchase Provisions at a moderate Price" (Calhoun 1983:9).

Figure 3. Example of dense vegetation within the survey corridor.

Vegetation

Speaking of the coastal plain Braun observed that:

> the vegetation of this region

> is in part warm temperate-subtropical, in part distinctively coastal plain, and in part temperate deciduous. It is made up of widely different forest communities - coniferous, mixed coniferous and hardwood, deciduous hardwood, and mixed deciduous and broad-leaved evergreen hardwood - interrupted here and there by swamps, bogs, and prairies. The large number of unlike communities is related to the diverse environmental conditions of the region (Braun 1974:282)

Indeed, an examination of the region around Berkeley and Dorchester counties reveals tremendous diversity. One detailed study revealed a mosaic including the oak-hickory-pine forest common to upland areas, oak-gum-bald cypress forest typical of the southern floodplains, pine forests found in mesic to xeric upland sites, mesophytic broadleaved forests on more mesic slope sites, old rice fields, and a variety of swamp forests such as the tupelo-cypress, low hardwood, and ridge hardwoods (Federal Power Commission 1977). All of these forest types have different dominants and different understory vegetation (see Barry 1980).

In the project area the vegetation is dense (Figures 3 and 4), including a broad range of mesic species, as well as briers, poison ivy, and other herbaceous materials.

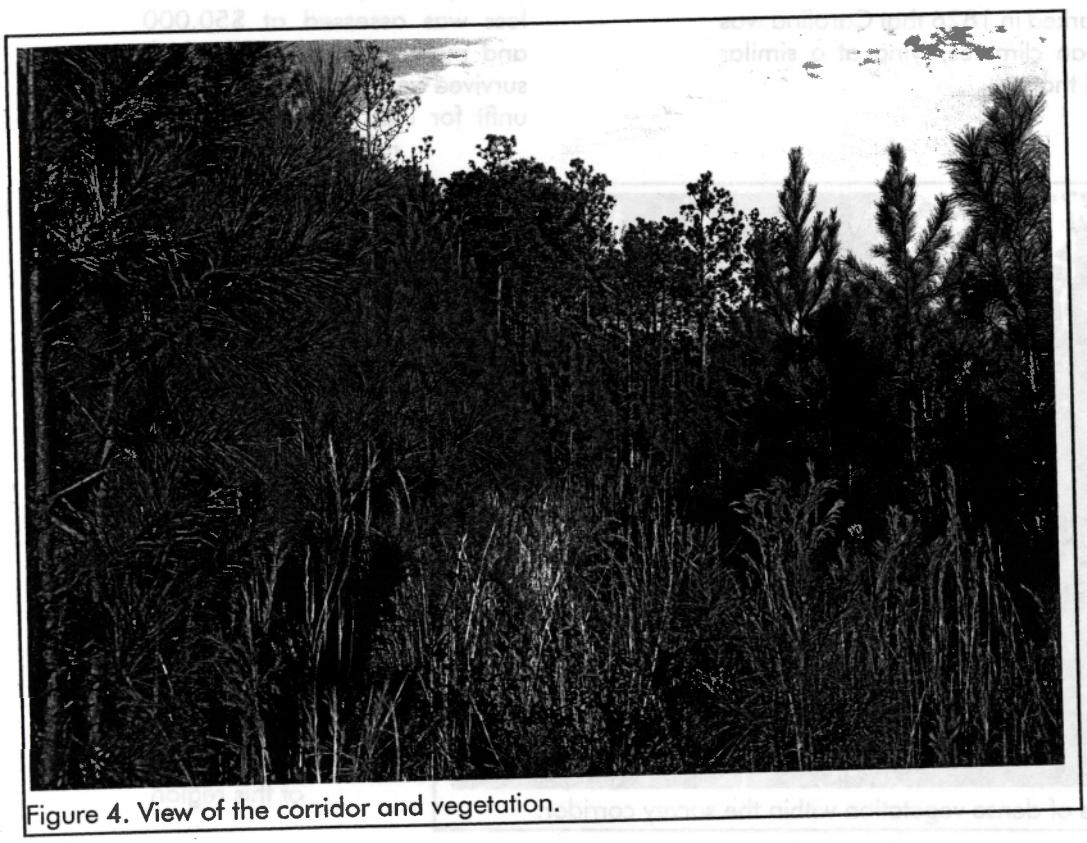


Figure 4. View of the corridor and vegetation.

PREHISTORIC AND HISTORIC SYNOPSIS

Prehistoric Synopsis

The Paleoindian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleo-Indian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

Unfortunately, little is known about Paleoindian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited mammal. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coastal plain and piedmont. Archaic period assemblages, exemplified by corner-notched and broad-stem projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

In the Coastal Plain of the South Carolina there is an increase in the quantity of Early Archaic remains, probably associated with an increase in population and associated increase in the intensity of occupation. While Hardaway and Dalton points are typically found as isolated specimens along riverine environments, remains from the following Palmer phase are not only more common, but are also found in both riverine and interriverine settings. Kirks are likewise common in the coastal plain (Goodyear et al. 1979).

The two primary Middle Archaic phases found in the coastal plain are the Morrow Mountain and Guilford (the Stanly and Halifax complexes identified by Coe are rarely encountered). Our best information on the Middle Woodland comes from sites investigated west of the Appalachian Mountains, such as the work in the Little Tennessee River Valley. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and South Carolina, where axes, choppers, and ground and polished stone tools are very rare.

The Late Archaic is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued the intensive exploitation of the uplands much like earlier Archaic groups. The bulk of our data for this period, however, comes from work in the Uwharrie region of North Carolina.

The Woodland period begins by definition with the introduction of fired clay pottery about

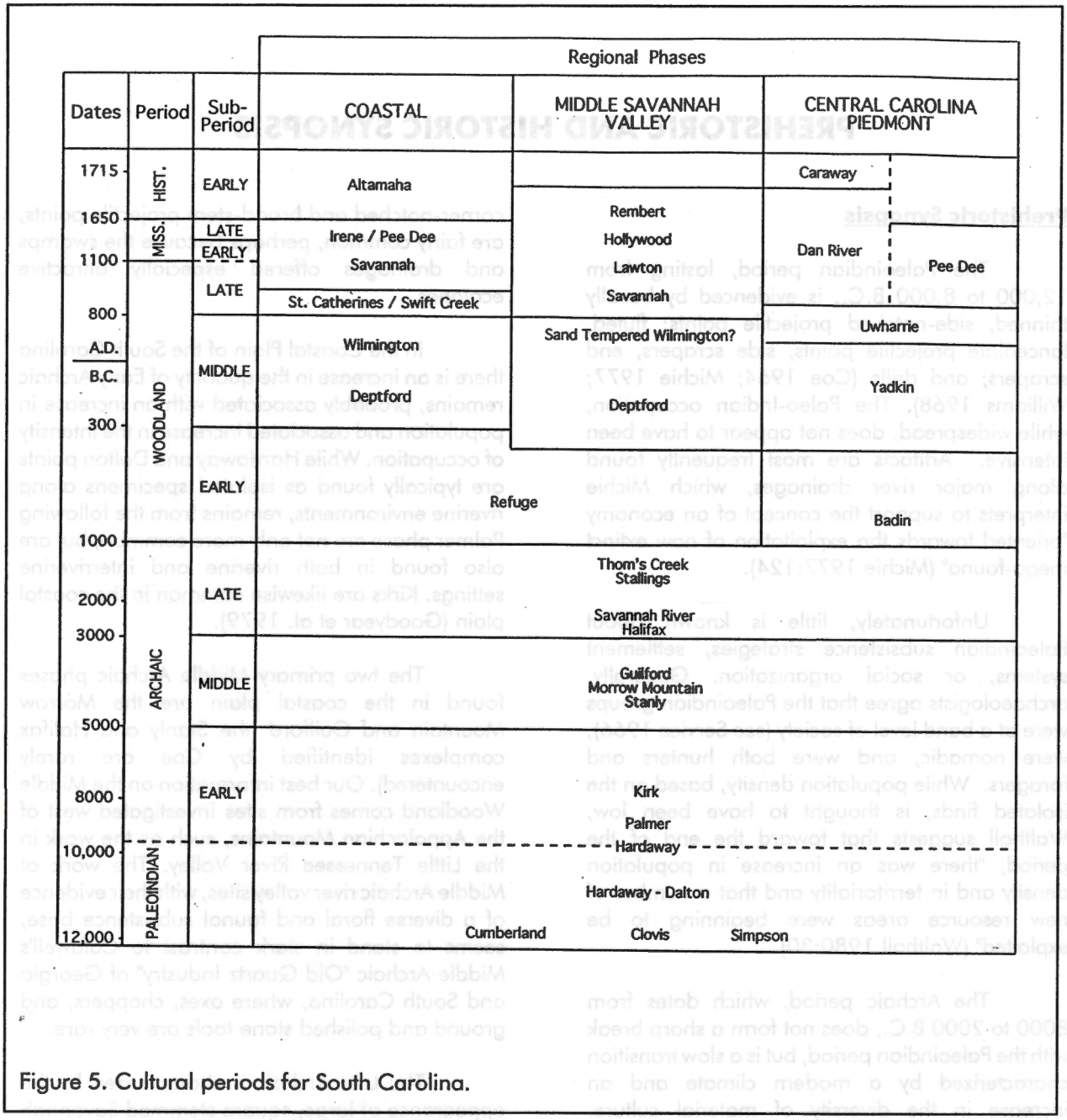


Figure 5. Cultural periods for South Carolina.

2000 B.C. along the South Carolina coast (the introduction of pottery, and hence the beginning of the Woodland period, occurs much later in the Piedmont of South Carolina). It should be noted that many researchers call the period from about 2500 to 1000 B.C. the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings (fiber-tempered) pottery (see Figure 5 for a synopsis of Woodland phases and pottery designations). The subsistence economy during this early period was based

primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish.

Like the Stallings settlement pattern, Thom's Creek sites are found in a variety of environmental zones and take on several forms. Thom's Creek sites are found throughout the South Carolina Coastal Zone, Coastal Plain, and up to the Fall Line. The sites are found into the North Carolina Coastal Plain, but do not appear to extend southward into Georgia.

In the Coastal Plain drainage of the Savannah River there is a change of settlement, and probably subsistence, away from the riverine focus found in the Stallings Phase (Hanson 1982:13; Stoltman 1974:235-236). Thom's Creek sites are more commonly found in the upland areas and lack evidence of intensive shellfish collection. In the Coastal Zone large, irregular shell middens, small, sparse shell middens; and large "shell rings" are found in the Thom's Creek settlement system.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland, sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Coastal Plain, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980b). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98).

Throughout much of the Coastal Zone and Coastal Plain north of Charleston, a somewhat different cultural manifestation is observed, related to the "Northern Tradition" (e.g., Caldwell 1958). This recently identified assemblage has been termed Deep Creek and was first identified from northern North Carolina sites (Phelps 1983). The Deep Creek assemblage is characterized by pottery with medium to coarse sand inclusions and surface treatments of cord marking, fabric impressing, simple stamping, and net impressing. Much of this material has been previously designated as the Middle Woodland "Cape Fear" pottery originally typed by South (1976). The Deep Creek wares date from about 1000 B.C. to A.D. 1 in North Carolina, but may date later in South Carolina. The Deep Creek settlement and subsistence systems are poorly known, but appear to be very similar to those identified with the Deptford phase.

The Deep Creek assemblage strongly resembles Deptford both typologically and temporally. It appears this northern tradition of cord and fabric impressions was introduced and gradually accepted by indigenous South Carolina populations. During this time some groups continued making only the older carved paddle-stamped pottery, while others mixed the two styles, and still others (and later all) made exclusively cord and fabric stamped wares.

The Middle Woodland in South Carolina is characterized by a pattern of settlement mobility and short-term occupation. On the southern coast it is associated with the Wilmington phase, while on the northern coast it is recognized by the presence of Hanover, McClellanville or Santee, and Mount Pleasant assemblages. The best data concerning Middle Woodland Coastal Zone assemblages comes from Phelps' (1983:32-33) work in North Carolina. Associated items include a small variety of the Roanoke Large Triangular points (Coe 1964:110-111), sandstone abraders, shell pendants, polished stone gorgets, celts, and woven marsh mats. Significantly, both primary inhumations and cremations are found.

On the Coastal Plain of South Carolina,

researchers are finding evidence of a Middle Woodland Yadkin assemblage, best known from Coe's work at the Doerschuk site in North Carolina (Coe 1964:25-26). Yadkin pottery is characterized by a crushed quartz temper and cord marked, fabric impressed, and linear check stamped surface treatments. The Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least A.D. 300 coexisted with this Triangular Tradition. The Yadkin series in South Carolina was first observed by Ward (1978, 1983) from the White's Creek drainage in Marlboro County, South Carolina. Since then, a large Yadkin village has been identified by DePratter at the Dunlap site (38DA66) in Darlington County, South Carolina (Chester DePratter, personal communication 1985) and Blanton et al. (1986) have excavated a small Yadkin site (38SU83) in Sumter County, South Carolina. Research at 38FL249 on the Roche Carolina tract in northern Florence County revealed an assemblage including Badin, Yadkin, and Wilmington wares (Trinkley et al. 1993:85-102). Anderson et al. (1982:299-302) offer additional typological assessments of the Yadkin wares in South Carolina.

Over the years the suggestion that Cape Fear might be replaced by such types as Deep Creek and Mount Pleasant has raised considerable controversy. Taylor, for example, rejects the use of the North Carolina types in favor of those developed by Anderson et al. (1982) from their work at Mattassee Lake in Berkeley County (Taylor 1984:80). Cable (1991) is even less generous in his denouncement of ceramic constructs developed nearly a decade ago, also favoring adoption of the Mattassee Lake typology and chronology. This construct, recognizing five phases (Deptford I - III, McClellanville, and Santee I), uses a type variety system.

Regardless of terminology, these Middle Woodland Coastal Plain and Coastal Zone phases continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the Fall Line, shell midden sites evidence sparse shell and artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. Recent investigations at Coastal Zone sites such as 38BU747 and 38BU1214, however, have provided some evidence of worked bone and shell items at Deptford phase middens (see Trinkley 1990).

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500 to 700 years (cf. Sassaman et al. 1990:14-15). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The South Appalachian Mississippian Period (ca. A.D. 1100 to 1640) is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest phases include the Savannah and Pee Dee (A.D. 1200 to 1550).

Historic Overview

While today encompassing parts of Berkeley and Dorchester counties, the entire corridor, for much of South Carolina history, was situated primarily in what was known as Berkeley. As one of the original three counties created in 1682, Berkeley included all of the corridor, although it was situated at the furthest interior edge. In 1685 and again in 1733 the size of Berkeley was increased, although it was eliminated in 1769 with the creation of the judicial districts. Berkeley County had a brief renewal in 1785, when it was created out of Charleston, although this Berkeley County incorporated primarily what is today Dorchester County. Regardless, by 1791

this Berkeley was again eliminated as a county administrative district by the reform of the judicial districts. Berkeley was created again in 1882 when it was created from Charleston County and it was during this period that Berkeley incorporated much of what is today both Berkeley and Charleston counties. By 1893 Berkeley had taken on a more modern appearance, although it included a significant strip of Dorchester County, including much of the project area. The county didn't assume its modern boundaries until 1962, when it lost a portion to neighboring Orangeburg County.

Both in 1769 and again in 1791, when counties were replaced by judicial districts, the study area fell into Charleston District, where much of it remained under 1882.

Looking at the broad patterns of history, the English established the first permanent settlement in what is today South Carolina in 1670 on the west bank of the Ashley River. Like other European powers, the English were lured to "new World" for reasons other than the acquisitions of land and promotion of agriculture. The Lords Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the mercantile system.

By 1680 the settlers of Albermarle Point had moved their village across the bay to the tip of the peninsula formed by the Ashley and Cooper rivers. This new settlement at Oyster Point would become modern-day Charleston. The move provided not only a more healthful climate and an area of better defense, but:

> the cituation of this Town is so convenient for public Commerce that it rather seems to be the design of some skillful Artist than the accidental position of nature (Mathews 1954:153).

The early settlers of the Carolina colony came from other mainland colonies, England, and the European continent. But the future of Carolina was largely directed by the large number of colonists from the English West Indies. This Caribbean connection has been discussed by Waterhouse (1975), who argues that the Caribbean immigrants were largely from old families of economic and political prominence which formed the Barbados élite. Waterhouse observes that while elsewhere in the American colonies the early settled families were displaced from their established positions of power and economic superiority by newcomers, this did not occur in South Carolina. In Carolina:

> a relatively large proportion of those who, in the middle of the eighteenth century, were among the wealthier inhabitants, were descended from those families who had arrived in the colony during the first twenty years of its settlement (Waterhouse 1975:280).

This immigration turned out to be a significant factor in the stability and longevity of South Carolina's colonial élite. It also firmly established the foundations of slavery and cash crop plantations.

Many of these Barbadian immigrants settled in the Goose Creek area, forming one of the most influential political and economic groups in the colony (Stoney 1938:19). The "Goose Creek Men" included individuals such as Maurice Mathews, James Moore and John Boone. They favored increased Indian slavery, trade with the pirates or privateers that sailed the Carolina coast, and generally ignored the efforts of the Lords Proprietors to control the Colony's economic and political future. While the political power of the Goose Creek faction peaked in the 1720s, it continued to evidence considerable economic power well into the late 1740s (see Morgan 1980; Sirmans 1966).

Early agricultural experiments which involved olives, grapes, silkworms, and oranges were less than successful. While the Indian trade was profitable to many of the Carolina colonies, it did not provide the Proprietors with the wealth they

were expected from the new colony. This trade was also limited since the Indian population was so dramatically reduced by European disease, the sale of alcohol, and slavery.

Cattle raising also was an easy way to exploit the region's land and resources, offering a relatively secure return for very little capital investment. Few slaves were necessary to manage the herd. The mild climate of the low country made winter forage more abundant and winter shelters unnecessary. The salt marshes on the coast, useless for other purposes, provided excellent grazing and eliminated the need to provide salt licks. More interior swamps found similar vegetation and provided a constant water supply (Coon 1972; Dunbar 1961). Production of cattle, hogs, and sheep quickly outstripped local consumption and by the early eighteenth century beef and pork were principal exports of the Colony to the West Indies (Ver Steeg 1975:114-116). This allowed the ties between Carolina and the Caribbean to remain strong, and provided essential provisions to the large scale, single crop plantations.

Rice and indigo both competed for the attention of Carolina planters. Although introduced at least by the 1690s, rice did not become a significant staple crop until the early eighteenth century. At that time it not only provided the Proprietors with the economic base the mercantile system required, but it was also to form the basis of South Carolina's plantation system — slavery.

South Carolina's economic development during the pre-Revolutionary War period involved a complex web of interactions between slaves, planters, and merchants. By 1710 slaves were starting to be concentrated on a few, large slave-holding plantations. By the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977). And by the end of the century over half of eastern South Carolina's white population held slaves. With slavery came, to many, unbelievable wealth. Coclanis notes that:

> on the eve of the American Revolution, the white population of the low country was by far the richest single group in British North America. With the area's wealth based largely on the expropriation by whites of the golden rice and blue dye produced by black slaves, the Carolina low country had by 1774 reached a level of aggregate wealth greater than that in many parts of the world even today. The evolution of Charleston, the center of the low-country civilization, reflected not only the growing wealth of the area but also its spirit and soul (Coclanis 1989:7).

Only certain areas of the low country, however, were suitable for rice production. During the early years rice was grown as an upland crop, in small fields adjacent to freshwater streams where water could be easily impounded and applied to the crop. By the early 1700s planters found that upland swamps, such as those in the Goose Creek area, were even better suited for rice, although the soils were quickly exhausted (Meriwether 1940; Sellers 1934). These upland swamps, distinct from well-drained uplands, remained the focus of Carolina rice agriculture during the entire Colonial period.

Hewat, writing in 1779, describes the process of upland swamp rice cultivation:

> after the planter has obtained his tract of land, and built a house upon it, he then begins to clear his field of that load of wood with which the land is covered. Having cleared his field, he next surrounds it with a wooded fence, to exclude all hogs, sheep, and cattle from it. This field he plants with rice . . . year after year, until the lands are exhausted, or yield not a crop sufficient to answer his

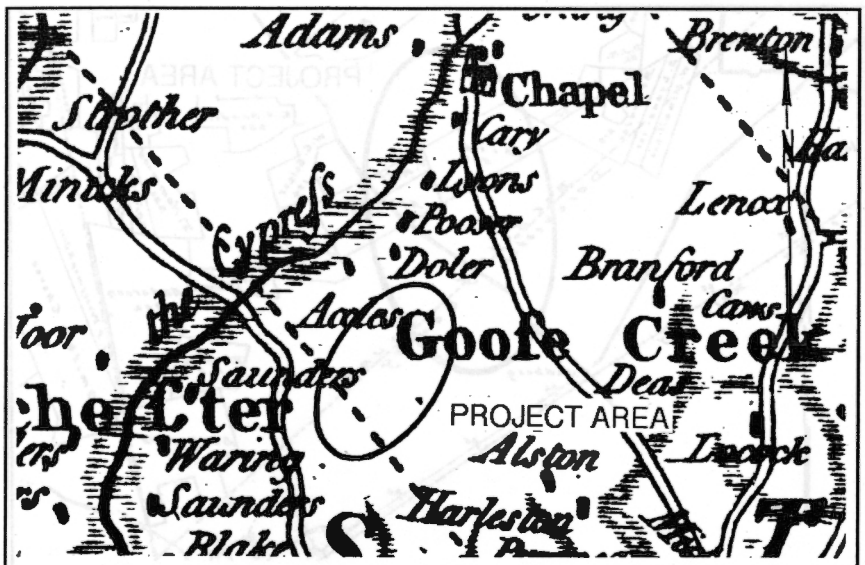


Figure 6. Portion of Mouzon's 1775 *An Accurate Map of North and South Carolina* showing the project area.

expectations. Then it is forsaken, and a fresh spot of land is cleared and planted, with is also treated in like manner, and in succession forsaken and neglected (Hewatt 1836:514).

This rather simplistic commentary failed to observe the engineering feat that upland swamp rice cultivation really was. Clearing, which alone was a monumental undertaking, was followed by the construction of dams, dikes, and trenches. By one estimate, a 500 acre rice field required 60 miles of dikes and ditches (Gunn 1976:1-16). Fields were carefully leveled to ensure that they could be completely covered by water. Rice was planted during two periods -- March 10 to April 10 and June 1 to June 10 -- avoiding May since vast migrations of "rice birds" passed through the state during that period and could destroy a crop. Rice was harvested in late August.

By 1730 the majority of the population of the colony, both rural and urban, was black (Wood 1974). By 1850, 46% of Charleston District's population (which included today's Berkeley County) consisted of African American slaves (DeBow 1854:302), although Hilliard (1984:37) indicates that more than 60% of the Charleston slaveholders by 1860 owned fewer than 10 slaves. Regardless, there remained vast plantations where the owner's wealth was achieved by the labor of black slaves.

Figure 6 shows that Mouzon's 1775 map shows considerable settlement along the edge of Cypress Swamp —

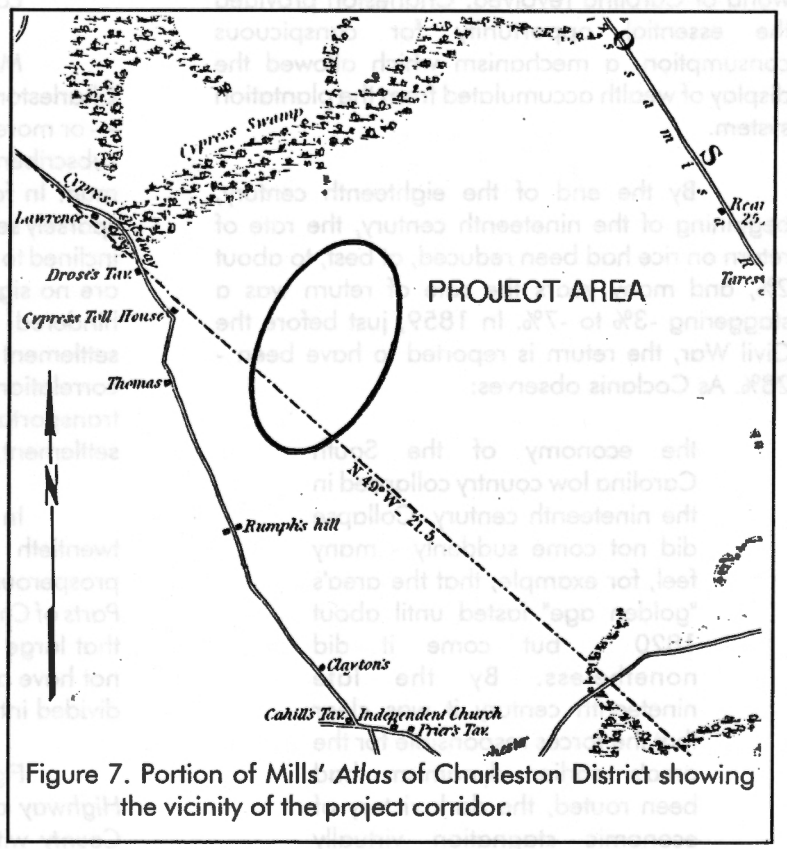


Figure 7. Portion of Mills' *Atlas* of Charleston District showing the vicinity of the project corridor.

in areas which would be conducive to upland or swamp rice cultivation. Further from the edge of the swamp — in the vicinity of the current project — there is virtually no major development. Much of the area was likely left either in woods or was farmed with upland subsistence crops.

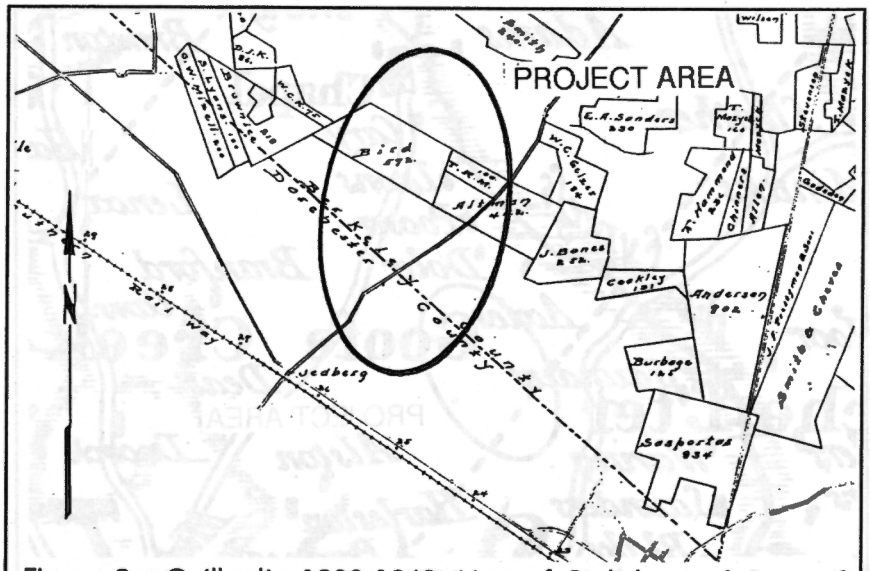


Figure 8. Gaillard's 1900-1962 *Map of Berkeley and Parts of Charleston and Dorchester Counties* showing area property owners.

During the eighteenth century the profits to be gained from rice were extraordinary, ranging from a 12% to nearly 28% net return on the investment, well exceeding other cash crops, such as tobacco or indigo (see Coclanis 1989:141). Charleston was the mecca around which the economic, political, and social world of Carolina revolved. Charleston provided the essential opportunity for conspicuous consumption, a mechanism which allowed the display of wealth accumulated from the plantation system.

By the end of the eighteenth century, beginning of the nineteenth century, the rate of return on rice had been reduced, at best, to about 2%, and many years the rate of return was a staggering -3% to -7%. In 1859, just before the Civil War, the return is reported to have been -28%. As Coclanis observes:

> the economy of the South Carolina low country collapsed in the nineteenth century. Collapse did not come suddenly - many feel, for example, that the area's "golden age" lasted until about 1820 - but come it did nonetheless. By the late nineteenth century it was clear that the forces responsible for the area's earlier dynamism had been routed, the dark victory of economic stagnation virtually complete (Coclanis 1989:111).

Mills' Atlas reveals that the survey tract, in Charleston District, is without settlement (Figure 7) — or more properly that Mills failed to identify any subscribers or others worthy of recording on his map. In fact, it appears that this region was so sparsely settled that the map makers were not even inclined to provide much topographic detail. There are no significant roads in the area, which likely hindered settlement. Examination of other settlement areas reveals that there is a consistent correlation between those areas and the nearby transportation network. To the southeast settlement, and roads, is far more dense.

In fact, it appears that even into the twentieth century the area was far from prosperous. The Gaillard *Map of Berkeley and Parts of Charleston and Dorchester Counties* reveal that large sections of the study area either could not have an owner readily identified or had been divided into very small parcels (Figure 8).

Figure 9 combines the 1939 *General Highway and Transportation Map of Dorchester County* with the 1951map for Berkeley County.

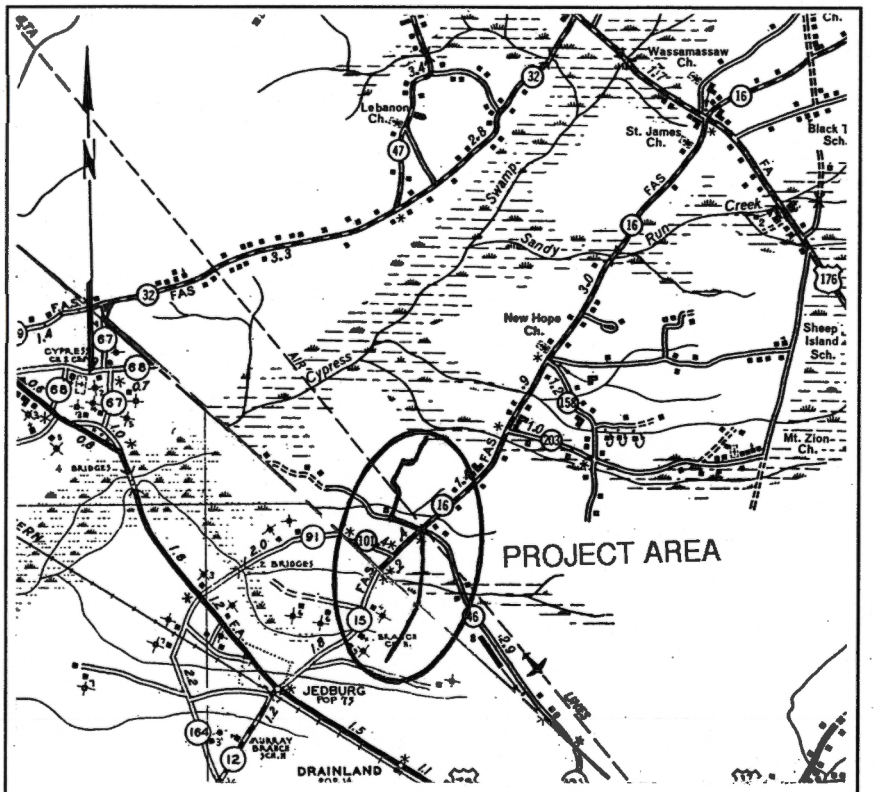
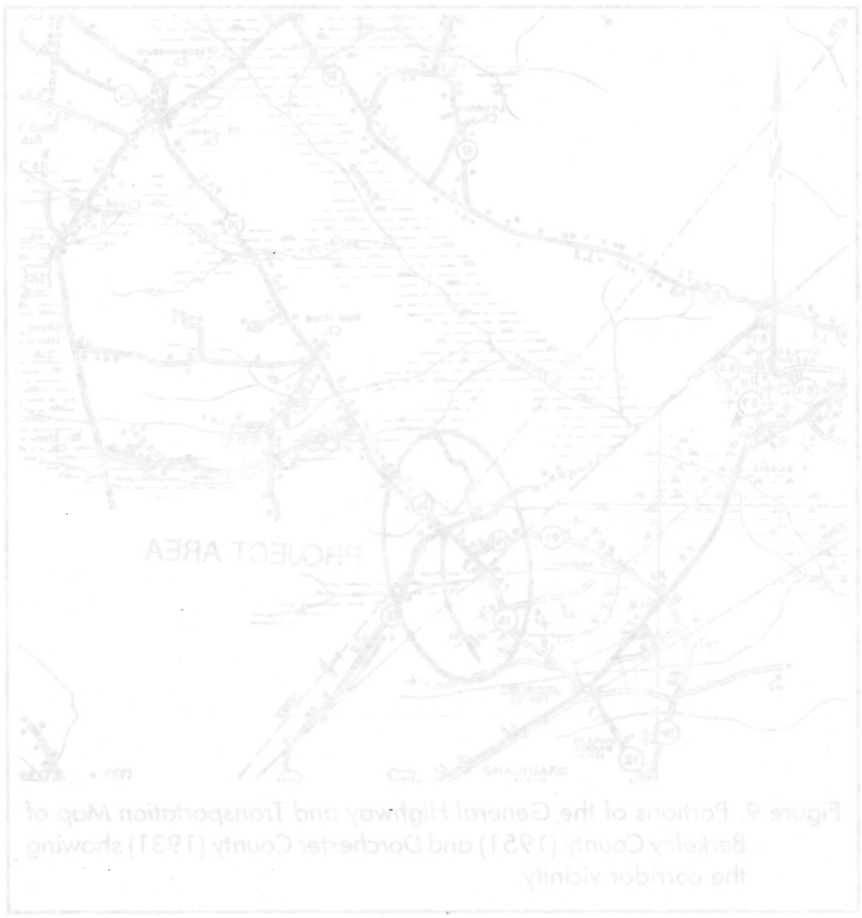


Figure 9. Portions of the *General Highway and Transportation Map of Berkeley County* (1951) and *Dorchester County* (1931) showing the corridor vicinity.

Although the maps are over a decade apart, the area can still be characterized as sparsely settled. There are no farm units or other sites indicated in the vicinity of the corridor on either map.



METHODS AND FINDINGS

Methods

The initially proposed field techniques involved the placement of transects every 100 feet along the centerline of the 70-foot wide corridor. All fill from shovel tests would be screened through ¼-inch mesh, with each test numbered sequentially, beginning in the north at the existing Carnes Crossroads-Arco 115kV line and continuing southward to the terminus at the new substation lot. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 to 2 foot, depending on soil conditions (primarily water and evidence of subsoil). All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (identified as three or more artifacts within a 25 foot diameter) be identified by shovel testing, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigator.

The actual field methods did not deviate substantially from those initially proposed. As previously discussed, the survey corridor was marked in the field, although overgrown in some areas. Most of the corridor ran through woods, except for a segment along the western edge of a field. In this field area we determined that the corridor crosses over a capped landfill. Shovel test profiles revealed banded clay and the area is today used by an airplane club. Shovel tests in this area were excavated, but no effort was made to penetrate the landfill cap. No shovel tests were excavated in the wetland crossings when they fell into standing water. Likewise, a few of the shovel tests revealed water in the tests and were incompletely excavated. During the time of the survey the area had received some of the first rain in several months. While conditions were still dry, the wet weather revealed that some areas, under more typical precipitation, would have been in standing water.

We anticipated that the corridor would require a total of 168 shovel tests — a total of 170 were actually excavated. The increase in number of tests is simply the result of pacing being slightly short of 100 feet in some areas (pacing was used since relatively few stakes on the cut centerline were either present or readable).

These tests generally revealed gray or gray-brown sandy loam A horizons overlying subsoils of gray to yellowish-brown sand or loam — consistent with the variety of soils previously discussed for the project area.

As previously discussed, no architectural survey was conducted as part of this study.

Findings

The shovel testing identified several modern (i.e., ca. 1980) artifacts on the ground surface. In addition, we note that there is a capped landfill in the survey corridor, although it appears to date from the second half of the twentieth century.

The shovel tests, however, failed to reveal any evidence of either historic or prehistoric occupation. The survey does tend to confirm the historic documentation that suggests that the tract was remote from the eighteenth and nineteenth

century settlements in the project area. The absence of prehistoric sites may be more directly associated to the absence of any well defined bluff areas overlooking drainages.

As previously mentioned, while there are a number of architectural sites previously recorded for the APE, none are situated on the project corridor. In addition, all of the identified structures have been previously determined by the State Historic Preservation Office to be not eligible for inclusion on the National Register.

CONCLUSIONS

This study involved the examination of a 3.2 mile long transmission line corridor located east of Cypress Swamp in the southern part of Berkeley County, beginning just north of I-26 and extending southward, into Dorchester County, terminating just east of the town of Jedburg. The project area is level, but does cross three drainages. The soils in the project area are low and generally poorly drained. The corridor is 70-feet in width and will be used to erect poles about 70 to 80 feet in height.

Historic research reveals that while today encompassing part of both Berkeley and Dorchester counties, the area has historically been primarily associated with Berkeley. It exhibits sparse settlement, probably the result of the low, poorly drained soils and lack of large creeks. Even the road system in the project area was developed primarily in the mid- to late-twentieth century.

Today the area is densely vegetated, although one portion of the corridor skirts the western edge of a capped landfill, now being used as a private runway. Although the centerline of the project was marked, portions of the corridor had begun to grow back up at the time of this study. The study incorporated the excavation of a single transect of shovel tests along the centerline of the project, being spaced every 100 feet. A total of 170 tests were excavated during the study.

The shovel tests revealed generally low, somewhat poorly drained soils. No historic or prehistoric artifacts were recovered in the survey (except for a few clearly modern items, which were discarded).

Although there are "islands" of higher ground along this corridor, most of the area is low and fairly distant from any well defined drainages. Where the corridor does cross the three drainages, there is no well defined bluff edge — making the corridor unattractive for prehistoric occupation. Even the edge effect of the survey corridor does not seem to have been adequate to encourage aboriginal settlement. We suspect that more favorable locations are likely found to the west, adjacent to Cypress Swamp.

Similarly, the failure to identify historic remains is again most likely the result of the very low elevation of the corridor. Historic maps fail to reveal any settlements in the project area. During the eighteenth century the edge of Cypress Swamp was the chosen area for plantation development, likely to take advantage of the inland swamp rice cultivation. By the nineteenth century settlements were moving away from swamp edges to either deep water or to major roadways — neither of which are present in the project area.

While no architectural study was included in this project, a review of previous work reveals that both Berkeley and Dorchester counties have received comprehensive surveys. All of the 10 structures previously recorded within a mile of the corridor have been previously determined not eligible for inclusion on the National Register.

It is possible that archaeological remains may be encountered in the corridor during construction activities. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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